

REMARKS

The claims are rejected on the basis of MANN (U.S. Patent 6,009,270). Reconsideration of the rejection is respectfully solicited in view of the foregoing amendments and the following remarks.

Independent claim 1 is amended to add the limitation "wherein said trace control register includes fields to specify an operating mode of said embedded processor, a current process being executed by said embedded processor, and load and store address information." These limitations are incorporated from canceled claims 10-12, thus no new matter is entered.

MANN provides program counter (PC) information, but does not show or suggest a trace control register with fields to specify an operating mode of an embedded processor, a current process being executed by the embedded processor, and load and store address information.

The Examiner indicates that MANN teaches a debug mode. The debug control status register specifies the debug mode in MANN. The use of a register to specify a debug mode is known, but this prior art technique does not show or suggest the use of a trace status control register with an operating mode field, as specified in amended claim 1. The prior art use of a separate register to initiate a debug mode does not show or suggest the use of a trace control register to produce synchronization information that includes an operating mode of an embedded processor, as currently claimed.

The Examiner maintains that MANN teaches trace synchronization information that identifies a current process being executed. In particular, the Examiner points to the teaching in MANN that states: "a trace synchronization entry (TCODE=0110, TCODE=0111) containing the address of the currently executing instruction is generated." (Col. 14:50-53) This code contains the *address* of the currently executing instruction, it does not show or suggest a trace control register with a field to specify a current process being executed, as currently recited in amended claim 1.

The Examiner also states that MANN teaches trace synchronization information including load and store address information. MANN teaches that: "A control interface state machine 206 coordinates the loading/reading of data to/from the serial debug shifter 212 and the

debug registers 210.” (Col. 5: 22-24) This teaching fails to show or suggest the claimed use of a trace control register with a field to specify load and store address information, as currently recited in amended claim 1.

Thus, amended claim 1 should be in a condition for allowance. Applicant respectfully traverses the rejections of dependent claims 2-9, but those rejections are moot in view of the amendments to claim 1 and the fact that claims 2-9 are dependent upon amended claim 1.

Reconsideration of the rejection of claim 13 is respectfully solicited. The rejection of claim 13 was on the same basis as the rejection of claims 1, 2, and 9-12. However, claim 13 includes different limitations than those recited in the previous claims. In particular, claim 13 recites trace synchronization information including information that enables a determination of a characteristic of an operating state of a processor. MANN supplies program counter information, but does not show or suggest the use of separate synchronization information to enable a determination of a characteristic of an operating state of a processor, as recited in claim 13. Thus, claim 13 and its dependent claims 14-18 should also be in a condition for allowance. It should be observed that claim 15 recites various operating modes that are not shown or suggested by MANN, as evidenced by the Examiner’s failure to cite any teaching MANN related to these claim features.

Claim 19 is amended to recite the limitation “wherein said trace control register includes fields to selectively generate software state information within said synchronization information, said software state information being selectable from an operating mode of said embedded processor, a current process being executed by said embedded processor, and load and store address information.” As previously indicated, MANN does not show or suggest a trace control register with fields to selectively generate software state information within the synchronization information, where the software state information is selectable from an operating mode, a current process, and load and store address information, as currently recited in amended claim 19. Therefore, claim 19 should now be in a condition for allowance.

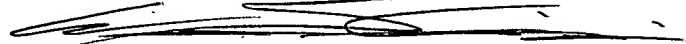
Independent claims 20 and 21 are amended to include the same limitation as claim 19. Therefore, independent claims 20 and 21 and dependent claim 22 should also be in a condition for allowance.

In view of the foregoing amendments and remarks, all claims should now be in a condition for allowance. If there are any residual matters that can be resolved through a telephone call, then the Examiner is requested to contact the undersigned.

Dated: Feb. 28, 2005

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